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UTAH'S ADJUSTMENT TO DECLINING DEFENSE BUDGETS

Jan Crispin-Little
Senior Research Analyst

James A. Wood
Senior Research Analyst

Introduction

In response to a joint resolution passed by the 1990 Utah State Legislature, the Bureau of Economic and Business Research, undertook a critical assessment of Utah's defense industry, particularly evaluating the impact of declining defense budgets and developing an action plan that could be used by the state to ameliorate the adjustment process.

During the course of the study, world events in the Middle East have forestalled, at least over the short term, any significant reductions in military spending. However, declining defense budgets are inevitable as pressures to reduce the federal deficit intensify.

While reduced commitments to military spending will enable the government to allot more money for other activities, it is increasingly apparent that the amounts will not be enough to significantly invigorate the economy. Defense spending, as a percentage of Gross National Product, is at its lowest point in modern history (roughly 5.5% of GNP in FY 1990), and real declines have been occurring since 1986. Indeed, cutbacks in defense may mean more spending for social programs, but not in the magnitudes originally thought.

Furthermore, the subsequent adjustment process bears a cost. Nationally, the macroeconomic impacts of declining defense budgets are unlikely to have a significant impact; however, at the regional level in areas which depend heavily on defense activities, those impacts could be severe.

The potential for industrial, labor force, and community disruptions is real. The purpose of this study is to explain the significance of military spending in the Utah economy, to identify the possible impacts of reductions and discuss appropriate actions that could be taken by the state to offset any negative impacts. The highlights of that study are presented in this article.

UTAH'S DEFENSE ECONOMY

Defense spending in Utah has long been recognized as a key source of income and employment for Utah residents, and a significant component of economic activity and growth. In 1989, roughly $2.0 billion in direct defense-related expenditures entered the Utah economy. The defense industry and military establishments employ approximately 50,300 people in Utah, or 6 percent of the civilian labor force. When the secondary impacts are considered, defense expenditures in Utah represent between 16 and 18 percent of total personal income, and at least 14 to 16 percent of the state's civilian labor force.

Composition of Utah's Defense Industry

Defense activity in Utah is almost evenly split between the industrial sector and military bases -- the two primary components of defense spending in the state. Industrial sector expenditures consist of direct purchases, in the form of Prime Contract Awards (PCAs) from contractors. Direct spending at military bases consists of direct salaries and wages paid to military and civilian DOD employees. Secondary, and much less important sources of defense spending are, military retirement pay and federal grants to state and local governments (Exhibit 1). Since 1983, the most stable source of defense spending in Utah has been wages and salaries paid to military and civilian DOD personnel. During the same time period, PCAs have been highly volatile. After peaking in 1986, the dollar value of prime contract awards declined sharply, hitting a five-year low in 1988.

In 1989, Utah received $2,076,807,000 from DOD, representing about 34 percent of all federal expenditures made in the state during that year.[1] Of the total, $948,600,000 was spent on military payrolls (wages, salaries, and fringe benefits) at Hill Air Force Base, Tooele Army Depot, Defense Depot at Ogden, Dugway Proving Grounds, and National Guard Units. Slightly more than $1.0 billion went to Utah companies (in the form of PCAs) who provided a variety of goods and services to agencies of DOD. However, the total $1.0 billion paid in PCAs to Utah firms represents only a portion of defense activity in Utah.

Prime contract data are an imperfect measure of total activity for several reasons. First, the data indicate when awards are made, but the actual expenditure may not occur during the specified year. A more serious limitation is the lack of subcontractor data. There is a substantial flow of defense spending on subcontracts (estimated by DOD to be about 50% of total PCAs) that is not reflected in the PCA data. Furthermore, PCAs identify the location of final stage production, but do not identify the share of work performed by subcontractors, or where the subcontracting share will be done.

Essentially all of Utah's major defense contractors do both prime contracting work for the Department of Defense and subcontracting work for other large defense contractors, many of which are not located in Utah. Finally, there is a great deal of PCA "leakage"; that is, prime contracts that are awarded to Utah companies but subcontracted to non-Utah firms. Therefore, the figures referred to in this study reflect only the **direct** expenditures made in Utah by DOD.

Exhibit 1
Federal Defense-Related Spending in Utah
1981 - 1989
($000s)

Year	Wages and Salaries[a]	Prime Contract Awards	Military Retirement	State/Local Government Grants	Total
1983	$667,761	$ 722,224	$ 81,024	$ 18	$1,471,027
1984	695,776	885,546	88,844	131	1,670,297
1985	737,548	1,115,879	90,220	695	1,944,342
1986	784,567	1,688,947	94,612	301	2,568,427
1987	794,294	1,343,924	98,743	5,766	2,242,727
1988	817,787	876,681	98,876	1,318	1,794,662
1989	870,295	1,010,016	108,005	10,186	1,998,502

[a] Does not include fringe benefits.
Source: Wage and Salaries, Military Retirement, and Grants to State and Local Governments: *Federal Expenditures by State for Fiscal Years 1983 through 1989*, U.S. Department of Commerce, Bureau of the Census; Procurements: Federal Procurement Data System, *DOD Federal Contract Awards over $25,000 for All 50 States*, Performed in Utah, DOD Summary Report (1989).

DOD Contract Awards

Total estimated employment within the defense industry is 22,500, with an annual payroll in 1989 (wages, salaries and fringe benefits) of $901,501,380.[2] As in the case nationally, defense jobs in Utah are comparatively high-paying. In 1989, workers in the defense sector averaged $30,816 annually while the state's non-agricultural annual payroll wage averaged $19,020.

Although in 1989 the total dollar volume of prime contracts awarded was higher than the total awarded in Utah in 1988, it was at least $300 million less than in 1987 and $600 million less than the total awarded in the peak year of 1986. Another measure of the volatility in prime contracting activity is the change in the number of companies receiving PCAs. In 1987, 535 companies received PCAs in Utah; 92 companies received more than one award. By the end of 1989, the number of Utah companies receiving a PCA had shrunk to 477, with only 65 receiving multiple awards.

Of the $1.0 billion in PCAs awarded to Utah during 1989, 53.1 percent was awarded by the Air Force, 20.1 percent was awarded by the Army, and the Navy awarded 12.4 percent. The remaining 14.4 percent was awarded by other agencies for defense-related activities.

Direct purchases by DOD from Utah companies consist primarily of manufactured goods -- $624.5 million of the $1.01 billion in 1989 PCAs (Exhibit 2). Utah's defense industry is characterized by high concentrations in the missile program which is dominated by Thiokol Corporation and Hercules Aerospace Company -- the only companies receiving prime contracts of more than $100 million in 1989.

Utah's defense industry is heavily concentrated in the missile programs. Components of two of the country's largest unclassified strategic systems -- the MX and Trident 2 Systems -- are being manufactured in Utah. The missile program has been key to the state's industrial defense growth. Thiokol, Hercules, Boeing, and TRW are all participating in the production and operation of the Air Force's Peacekeeper missile (MX), an advanced system replacing the Minuteman missile. Hercules is producing the third-stage motor and Thiokol is producing the first-stage motor.

Hercules and Thiokol are also involved in the development of another strategic missile, the Trident 2. Both Hercules and Thiokol are participating in the manufacture of the propulsion systems for the Trident 2. Thiokol is producing first and second-stage Trident 2 motors.

Hercules is partner with Thiokol on the first-stage motor. The Midgetman missile is yet another system on which Hercules and Thiokol are working. Hercules is developing the third-stage motor, laser ordnance system, stage separator, and ignition system. Thiokol is developing the first-stage motor for the missile.

Beyond the strategic missile programs for the Air Force and the Navy, Thiokol, Hercules, and Williams International are also propulsion manufacturers for a number of other DOD missile programs (HARM, ALCM, and STANDARD). Teleflex Defense Systems also produces missile launch systems for the AMRAAM missile, and the Army's Tow 1,2,2A missile system.[3]

This high concentration in the missile program is demonstrated in PCA data. In Utah, the heaviest concentration of defense spending occurs in the Transportation Equipment Standard Industrial Code (SIC 37); specifically in SIC 3764 which includes guided missiles, space vehicles, propulsion units and parts. In 1987, contracts awarded to companies classified under this SIC code totaled $844 million; an increase of $252 million over 1986 and approximately 63 percent of all PCAs awarded to Utah in 1987. Not surprisingly, the average annual employment reported in this segment of the manufacturing industry also increased, although not as dramatically.

In both 1988 and 1989, PCAs in SIC 3764 have been lower than at any point prior to 1987. Subsequent drops in employment have occurred and further reductions are expected. However, the magnitude of these reductions is difficult to determine for the following reasons: (1) Contracts have different terms and completion dates; (2) a large part of the contract may be earmarked for completion outside of Utah; and (3) the amount of subcontracting work that enters the state is unknown.

Many companies in Utah receive PCAs, but not all depend on defense contracting for their revenues. Other sizable segments of Utah's defense industry include Services ($118.2 million) and Construction ($115.5 million). And, while many of Utah's largest companies regularly receive PCAs, almost half (46.5%) of the companies winning DOD awards in 1989 had fewer than 100 employees. Construction firms and consulting companies were among the smallest. Exhibit 3 identifies those companies receiving large PCAs in 1989 and their primary products and/or services. These 16 organizations accounted for little over 75 percent of all PCAs awarded in 1989.

Exhibit 2
Prime Contract Awards Performed in Utah
Grouped by Major Industries
1987 - 1989

Industry	1987	1988	1989
Mining	**$0**	**$0**	**$760,000**
Construction	**54,971,000**	**77,922,000**	**118,419,000**
Manufacturing	**1,088,685,000**	**560,631,000**	**643,685,000**
Petroleum Refining	13,878,000	17,222,000	76,613,000
Electronic, Electrical Equipment and Components	106,81,0009	82,633,000	32,441,000
Transportation Equipment	884,088,000	333,784,000	490,729,000
Transportation and Public Utilities	**20,150,000**	**21,677,000**	**68,657,000**
Electric, Gas and Sanitary Services	19,339,000	20,066,000	13,903,000
Wholesale Trade	**30,090,000**	**31,037,000**	**21,045,000**
Durable Goods	26,995,000	28,723,000	18,046,000
Retail Trade	**1,299,000**	**1,167,000**	**2,243,000**
Eating and Drinking Places	741,000	317,000	1,257
Finance, Insurance, Real Estate	**749,000**	**666,000**	**0**
Services	**104,391,000**	**153,878,000**	**118,575,000**
Business Services	29,906,000	31,999,000	14,874,000
Educational Services	18,014,000	21,496,000	36,171,000
Engineering, Research, Management Services	48,964,000	95,274,000	60,929,000
Local Governments	**632,000**	**1,547,000**	**2,057,000**
Total	**$1,300,967,000**	**848,525,000**	**975,441,000**
Not Specified[a]	42,957,000	28,156,000	34,575,000
Grand Total	**$1,343,924,000**	**$876,681,000**	**$1,010,016,000**

[a] Includes Prime Contracts awarded to companies for which no SIC or industry designation could be identified.

Source: Federal Procurement Data System, *DOD Federal Contract Awards over $25,000 for all 50 States*, Fiscal Year 1989.

Exhibit 3
Companies Receiving Largest Prime Contract Awards
Performed in Utah - 1989

Company	Multiple Contracts	Prime Contract Award ($000s)	Product or Service
Thiokol Corporation	Y	$293,244	Solid propulsion systems, ordnance and composite products for space and defense.
Hercules Aerospace Company	Y	158,987	High energy solid propellants and high performance structures for DOD, NASA and commercial applications.
Amoco Corporation	N	49,710	Oil refining.
EG&G Intertech	N	46,921	Construction.
Utah State University	N	31,705	Educational institution.
TRW Inc.	Y	30,836	Technical support for the Peacekeeper and Minuteman missile programs.
Oakland Construction	N	30,570	Commercial and industrial contractor.
Crysen Refining Corporation	N	19,024	Gasoline, diesel and jet fuels, and asphalt materials.
Litton Systems	N	15,098	Inertial navigation systems for ships, aircraft, and missiles.
Big D Construction	Y	12,260	Non-residential contractor.
Clement Brothers	N	12,000	General contractor.
Unisys Corporation	Y	11,478	Specialized microwave communication systems for military applications.
Gramoll Construction	N	11,436	Construction.
Utah Power & Light	Y	11,225	Electric company.
Williams International Corporation	N	10,714	Small gas turbo engines for the Cruise missile program, and jet engines for target drone for Northrop Corporation.
Fiber Technology	N	10,188	External survivable fuel tanks for helicopters.

Source: Federal Procurement Data System, *DOD Federal Contract Awards over $25,000 for All 50 States*, Performed in Utah in Fiscal Year 1989.

County Distribution of Prime Contract Awards

As shown in Exhibit 4, PCAs are concentrated in a handful of Utah counties - namely, Box Elder, Davis, Salt Lake, Tooele and Weber. This level of concentration has remained fairly constant over the past five years with the exception of a substantial increase in Tooele County resulting from several large construction projects at Tooele Army Depot and Dugway Proving Grounds (Exhibit 4).

Exhibit 4
Department of Defense Contract Awards by County
1984 Through 1989
($000s)

County	1985	1986	1987	1988	1989
Box Elder	$179,409	$226,967	$558,619	$186,480	$286,668
Cache	19,696	31,376	13,281	17,535	35,659
Carbon	845	1,844	650	7,323	4,215
Davis	222,453	352,129	154,528	211,153	143,119
Duchesne	0	0	98	0	4,029
Grand	451	451	0	0	0
Juab	0	0	91	217	0
Morgan	109	145	62	35	0
Rich	0	30	0	56	0
Salt Lake	596,535	896,492	485,428	333,418	318,662
San Juan	2,155	2,974	972	794	1,410
Sanpete	0	0	92	0	0
Sevier	1,126	1,747	532	357	605
Summit	92	121	45	0	1,232
Tooele	32,774	77,377	44,989	47,187	131,824
Uintah	0	0	135	392	225
Utah	21,558	33,928	23,023	35,542	34,727
Washington	9,679	9,679	0	489	199
Weber	29,037	53,754	61,379	35,428	47,442
Total	$1,115,879	$1,688,947	$1,343,924	$876,681	$1,010,016

Source: Federal Procurement Data System, *DOD Federal Contract Awards over $25,000 for All 50 States*, Fiscal Years 1985 Through 1989, Arlington, VA.

Military Activities

In 1989, the Department of Defense employed 28,000 people (22,000 civilian DOD and 5,800 military) at military bases located throughout Utah. Almost $1.0 billion was spent for military and civilian payrolls (wages, salaries, and fringe benefits). The average annual wage in 1989 for military and Civilian DOD employees was $29,538 -- again, significantly higher than the average non-agricultural wage in the state.[4]

Utah's inventory of active military bases includes Hill Air Force Base, Tooele Army Depot, Defense Depot at Ogden, and Dugway Proving Ground (Exhibit 5). Military bases have played an active role in shaping Utah's economy. For example, the growing demand by DOD for the services and support provided by Hill Air Force Base has resulted in a base employment level of almost 20,000 employees - making it the largest employer in Utah. Along with the contributions made by military bases to Utah's economic growth has come a certain degree of vulnerability at the local level. Military spending in Utah is unevenly distributed and is heavily concentrated in a few counties -- Davis, Weber, Tooele, and to a lesser extent, Salt Lake.

Exhibit 5
Economic Profile of Military Bases in Utah - 1989

	Employment	Payroll[a]	Operating Budget
Hill Air Force Base	19,879	$590,113,804	$1,400,000,000[a]
Tooele Army Depot	4,053	158,100,000	279,400,000
Defense Depot Ogden Utah[b]	2,315	82,400,000	$114,800,000
Dugway Proving Grounds	1,114	32,500,000	90,000,000

[a] estimate
[b] Payroll figures do not include fringe benefits.
[b] Payroll and operating budget figures do not include 1120th Army Signal Battalion.
Source: Interviews with base personnel, November 1990 and various base publications.

At the present time there is a great deal of uncertainty as to future defense spending levels; however, none of the bases identified have been slated for closure, though consolidations and employment reductions are anticipated. Recently, as a result of budgetary constraints, Hill Air Force Base has announced plans to reduce its work force during the upcoming year.

Trends

Changing defense strategies at the federal level are certain to have significant implications for Utah as reductions in defense spending appear inevitable. Though developments in the Middle East have slowed momentum for deep defense cutbacks, and may forestall any significant reduction in the short term, the major changes in Eastern Europe, combined with pressures to reduce the federal deficit, make it likely that long-term defense spending will continue its downward spiral. According to *Aviation Week and Space Technology*, neither Operation Desert Shield, nor the prospect of new arms sales to Middle Eastern Allies, will pull the U.S. defense industry out of its steepest nosedive in 40 years. Some of the major trends in defense contracting include:

- **Increasing competition.** Most defense contractors will be conducting business in a much more competitive environment than in the past. Shrinking defense budgets will mean fewer contracts, canceled programs, and a diminishing amount of new business. One way that companies have tried to ameliorate their losses is to reduce the amount of work they subcontract. While this effectively postpones employee displacement at the prime contractors, it increases competition at the subcontracting level.

Utah's businesses, defense and non-defense alike, are already feeling the effects of this competitive environment. Utah companies compete for PCAs with companies located throughout the United States. Many companies have indicated that they are now competing for contracts with a growing number of non-Utah firms.

- **Changing Environment in Defense Contracting.** Along with reductions in defense spending, DOD is also changing the way it does business. There will be even fewer cost-plus contracts as DOD tries to shift part of the risk to the contractor. The federal government is demanding more up-front investment requiring private industry to assume more risk in developing weapons systems. Penalties for contract discrepancies are becoming more prevalent. There is a greater emphasis on awarding contracts based on the lowest price where, in previous years, more consideration was given to technical qualifications, experience and ability. Finally, DOD is also encouraging greater participation in the bidding process by foreign competitors.

- **Change in Demand.** In the upcoming era of greatly reduced military spending, major weapon production

programs are winding down. Inside and outside the government there is widespread uncertainty about the need for new weapons and systems which until recently were taken for granted.

- **Consolidation of Military Bases.** In 1989 Secretary of Defense Dick Cheney proposed closing 29 military bases, depots, and plants located throughout the U.S. While events in the Middle East have temporarily forestalled the closure of military bases throughout the United States, it is clear that base closures and consolidations are inevitable.

- **Reductions in Defense Industry Employment.** Unemployment in the aerospace industry is expected to soar as defense contractors become adjusted to shrinking defense budgets. Since January 1990, according to industry analysts, more than 45,000 defense-related jobs at major defense manufacturers have been earmarked for elimination sometime within the next 18 months. An additional 90,000 to 135,000 positions could be lost at the vendor level as a consequence of cutbacks at the prime contractors. The majority of the 45,000 defense related jobs planned for elimination are in the manufacturing sector. Analysts are projecting that these individuals will have a difficult time finding employment within the industry as hiring in the commercial segment has come to a standstill.

As result of reduced spending at the federal level, and in the face of increased competition, many of Utah's large defense contractors have gradually been reducing their employment levels over the past two to three years, largely through attrition. As defense companies scale back to keep in line with declining military expenditures, the long-term outlook is for continued reductions, which will likely involve layoffs over and above what can be accomplished through normal attrition.

Effects of Reduced Defense Spending on Utah

While reduced commitments to defense may enable the government to allot more money for other endeavors, the adjustment process has its costs. Disruptions, which are certain to occur at defense-related companies, will impact all levels of Utah's economy. The effects of reduced spending will have direct consequences for defense contractors and subcontractors, military bases, and finally, state and local units of governments.

Depending upon what components of the defense budget are cut, reductions in defense outlays could result in employment layoffs in Utah ranging from 2,700 to 6,000 people through the end of 1991. These reductions represent total direct, indirect, and induced impacts; are a worst case scenario; and assume that no diversification takes place. Based on current federal policies, further declines of 3 to 5 percent annually from 1992 to 1997 are realistic.[5]

What will declining defense budgets mean for Utah's military bases? Utah's military bases are perhaps most vulnerable to cutbacks within the next 12 months. Private defense contractors have more flexibility in using the commercial market to offset reductions in the defense market. Operations at military bases are driven by the availability of budgeted monies, and consolidation and closure decisions made at a higher level. One military base in Utah, HAFB, has already felt the repercussions of cutbacks, and recently announced a reduction in force effective early in 1991. However, at the present time, not one of the state's active military bases has been slated for closure. Furthermore, there is pending legislation that would require advance notification of potential base closure and federal monies available to assist communities in the economic conversion process that follows a base closure.

How will these layoffs affect local economies? In general, the sensitivity of an economy to changes will depend on the strength of that economy. A relatively large cut in a well-diversified, growing economy is more easily absorbed than a small dollar cut in a defense-dependent one. In Utah the economic base of several counties (Box Elder, Davis, Weber, and Tooele) is relatively dependent upon military spending. Determining the actual impacts on these economies of military base layoffs and cutbacks in defense contracts was beyond the scope of this study; however, the likely impacts will include fewer sales at local businesses, and a reduction in the local tax base.

What are the consequences for industry? Utah's defense contractors vary in their reliance on defense, but most depend upon military spending for at least 50 percent of their revenues. Conversion or diversification will be most difficult for companies which manufacture complete or semi-complete systems (weapons, missiles, etc.). Companies which manufacture components, especially electronic components, face fewer challenges in entering the commercial market. It is possible that some defense contractors may reevaluate their commitment to defense and opt to leave the industry altogether. Industry analysts estimate that it takes approximately three to five years for a defense contractor to successfully reduce the ratio of defense to commercial business. Those who choose to remain will have to streamline their organizations and fight even harder for a decreasing number of contracts. Either option has limitations and a high degree of certainty that further employment reductions are forthcoming.

The long term picture may be brighter. There is a growing recognition in Congress that the need for an effective military capability did not disappear with the end of the Cold War in Eastern Europe. In all likelihood declines in defense expenditures will be gradual and orderly, thus allowing contractors to keep manpower disruptions at moderate levels.

In any case, the adjustment process is not an unfamiliar one with Utah businesses. On at least three occasions in the past, the Utah economy has experienced substantial reductions in defense spending. These cutbacks have been associated with demobilization following World War II, the Korean Conflict and the Vietnam War. Although the present prospect of reduced defense spending is not related to demobilization from a wartime economy, the consequences are expected to be the same -- employment layoffs for military installations and defense contractors.

The World War II Experience

Federal Defense Employment. World War II introduced large-scale defense spending to the western United States and Utah. Prior to World War II, federal defense employment at military installations in Utah was less than 1,000. Mobilization for war and the construction of eight federal military installations[6] in the state brought employment to 30,000 by 1944; once the war was over employment at these new military installations plummeted by more than 50 percent to 14,000, Chart 1

Defense Manufacturing. Combined with the large loss of jobs at military installations was the loss of jobs in defense manufacturing activities. The most notable was the Remington Arms Company which operated in Salt Lake County. Employment at Remington peaked in 1942 at 10,000, but by 1945 had dropped to 1,500. Two other examples of significant defense-induced employment declines are: (1) Geneva Steel Plant where over 3,000 employees were laid off between 1944 and 1945; and (2) Eitel-McCullough, a radio tube manufacturer, where employment fell from 1,700 in 1943 to only 600 in 1945.

Adjustment Process. Although the Utah economy experienced massive defense employment cutbacks following World War II, no state agencies or programs were developed to assist in the economic transition from a wartime to peacetime economy beyond the activities of the Utah Department of Employment Security. During the transition period, 1945 to 1950, the unemployment rate fluctuated between 4.5 percent and 7.5 percent. "After the end of World War II fighting, in 1946, when the rest of the nation was beginning its readjustment period and employment was dropping, Utah's rate of unemployment remained relatively stable. Utah was one of the few states in the nation to 'hold its own' during this period."[7]

Chart 1
Federal Defense Employment in Utah
1939 - 1989

Source: Utah Department of Employment Security

The Korean Conflict/Cold War Experience

Federal Defense Employment. The Korean Conflict pushed federal defense employment back near the peak levels of World War II. In less than 24 months, federal defense employment in Utah increased from 15,000 to 28,000, but it was short-lived. By 1955, only three years later, federal defense employment had fallen to 19,700 as demobilization once again led to widespread employment layoffs, Chart 1.

Defense Manufacturing. Unlike World War II, the aftermath of the Korean Conflict was not accompanied by significant declines in defense manufacturing. Instead, the beginning of the Cold War and impressive Soviet missile innovations created a new defense industry in Utah, which helped to offset the reductions in federal defense employment. The new aerospace industry in Utah had its beginning in 1956 with the Sperry Utah operations in Salt Lake City and the Marquardt operations in Ogden. These were followed by operations at Thiokol in Box Elder County in 1957, Hercules' expansion into missile work in 1958 and the location of the Boeing Company at Hill Air Force Base in 1959. Employment in Utah's aerospace industry reached 13,000 by the early 1960's. "Air Force contracts let in Utah for missile work began to spiral, and the Beehive State's proportion of defense contracts rose rapidly to 1.6 percent of total DOD awards. By 1963, Utah was receiving $408 million in defense contracts, an absolute gain of 1700 percent since the Korean Conflict, and the largest gain recorded by any state."[8]

Adjustment Process. Beyond the activities of the Utah Department of Employment Security, no state agencies or programs were developed to assist in the economic adjustment following the Korean Conflict.

The Vietnam War Experience

Federal Defense Employment. Utah's military installations experienced another round of rapid employment increases during the Vietnam War. Between 1965 and 1967 federal defense employment in Utah rose 50 percent from 20,000 to 30,000 employees. Demobilization following the Vietnam War was much more gradual than the experience of World War II and the Korean Conflict. Employment reductions averaged about 3 percent a year (800 to 1,000 employees) from 1967 to 1980, when total federal defense employment bottomed out at 20,000 employees.

Defense Manufacturing. Defense manufacturing following the Vietnam War did not experience severe cutbacks, but rather had stable to modest employment growth throughout the decade of the 1970's.

Adjustment Process. Beyond the activities of the Utah Departent of Employment Security no state agencies or programs were developed to assist in the economic adjustment following the Vietnam War. The gradual rate of demobilization combined with economic prosperity countered the need for government assistance programs. As noted by Curtis Harding, Administrator of Utah Department of Employment Security, "Without exception, 1973 has been our best year ever. Possibly we are on the threshold of a monumental turning point in the state's economic history. We have just passed through a two-year period in which the Utah economy has generated new nonfarm, wage and salary jobs at the astonishing rate of over 20,000 per year...it appears we have left a long-term annual growth factor of 3 percent, which has prevailed for nearly 20 years, and stepped up to an annual growth rate in the range of 5 percent."[9]

Historical Comparisions

In relative terms, there is little comparison between the adjustment process required following World War II and that anticipated from reduced military spending in the 1990's. In 1945, the 28,000 federal defense employees in Utah accounted for 17 percent of the state's nonagricultural employment; whereas, in 1989 federal defense employment of 22,000 represented only 3 percent of the nonagricultural employment in the state. For purposes of comparability with the World War II period, federal defense employment in Utah in 1990 would have to approach 120,000 and then plummet to about 59,000 by 1992. And to be analogous to the Korean Conflict, federal defense employment in Utah would have to be about 94,000 in 1990 and then fall to 67,000 by 1992. Chart 2 shows federal defense employment as a percent of total nonagricultural employment from 1939 to 1989.

Chart 2
Federal Defense Employment as a Percent of Total Employment in Utah, 1939-1989

Source: Utah Department of Employment Security

Conclusion

Economic volatility created by dramatic shifts in defense spending has been a characteristic of the Utah economy for nearly 50 years. Historically, during periods of spending cutbacks the state has taken no direct action to provide financial, marketing or management assistance to defense manufacturers. For individuals who have been laid-off, state assistance has been limited to existing Employment Security programs such as job training and unemployment compensation.

In the past, employment layoffs have set in motion labor market adjustment processes that have mitigated the impacts on individuals and communities. The most important adjustment process has been the geographic mobility of labor. Defense workers exhibit a high degree of geographic mobility, i.e., laid-off workers seek employment elsewhere as in the case of the more than 1,000 engineers and scientists laid-off at Thiokol in 1989. The second adjustment process has been industrial mobility. In order to find reemployment many workers accept employment in another industry. The third adjustment process has been occupational adjustments. An unemployed defense engineer will seek non-engineering work elsewhere. The fourth adjustment process has been for the unemployed worker to lower his/her labor price to facilitate reemployment.

Hence, it is fair to say that the adjustment process to reduced defense spending has been left to market forces. Although reduced defense spending has created short-term economic dislocations for individuals and firms the adjustment process, in the past, has been achieved through the dynamics of the market economy, which has reallocated financial, physical and human resources to efficient uses.

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[1] Total federal expenditures in Utah during 1989 were $6,191,000,000. Source: *Federal Expenditures by State for Fiscal Year 1989*, U.S. Department of Commerce, Bureau of the Census, (March 1990).

[2] Employment estimates: Defense Budget Project (Washington D.C.); Payrolls and average monthly wage information: Bureau of Economic and Business Research based on prime contract award data and average wage data provided by the Utah Department of Employment Security.

[3] *Aerospace Target Industry Study*, Bureau of Economic and Business Research, Graduate School of Business, University of Utah (1989).

[4] Military and civilian DOD employment estimates: Defense Budget Project (Washington D.C.); Payroll data: *Federal Expenditures by State for Fiscal Year 1989*, U.S. Department of Commerce, Bureau of the Census, (March 1990); Monthly wage information: calculated by BEBR based on prime contract award data and average wage data provided by the Utah Department of Employment Security.

[5] These figures represent the ranges of layoffs that could occur depending upon which components of the defense budget are cut.

[6] Hill Field, Clearfield Naval Supply Depot, Utah Army Service Forces Depot, Ogden Arsenal, Tooele Ordnance Depot, Deseret Chemical Warfare Depot, Dugway Proving Grounds, and Tooele Engineering and Redistribution Center.

[7] Nelson, Elroy. Utah's Economic Patterns, (1956) pg. 15.

[8] Clayton, James L. The Economic Impact of the Cold War, (1970), pg. 74.

[9] Harding, Curtis P. "The New Utah", Utah Economic and Business Review, (September 1973).

Utah Business Statistics

UTAH DATA	Aug. 1989	Aug. 1990	% Change from Year Ago	12 Month Average This Year	12 Month Average Last Year	12 Month Average % Change
Total Personal Income (seasonally adjusted) (mil. of dol.) (qtly.)	22,444	NA	NA	NA	21,769	NA
New Corporations (no.)	420	685a	63.1%	495	449	10.4%
New Car, Truck, and Motor Home Sales (no.)	5,953	NA	NA	NA	5,138	NA
Agriculture						
Average Prices Recorded by Farmers (dol.)						
Beef Steers and Heifers (cwt) (thous.)	71.90	74.80	4.0%	74.98	71.43	5.0%
Lambs (cwt)	62.80	46.00	-26.8%	52.50	62.33	-15.8%
Milk Wholesale (cwt)	12.30	13.50	9.8%	13.59	12.06	12.7%
Alfalfa Hay, Baled (per ton)	86.00	85.00	-1.2%	85.33	82.25	3.7%
Cattle Slaughtered (live weight) (thous. of lbs.)	49,677	51,346	3.4%	47,904	47,352	1.2%
Construction						
Total Construction (thous. of dol.) 1	83,879.3	110,589.4	31.8%	88,790.4	69,283.7	28.2%
Residential	47,809.9	60,441.3	26.5%	43,048.0	34,693.6	24.1%
Nonresidential	20,418.6	29,471.4	44.3%	29,456.1	21,827.6	34.9%
Additions, Alterations, and Conversions	15,650.9	20,676.7	32.1%	16,286.4	12,762.5	27.6%
Total Permit Construction (thous. of dol.) 2	84,777.9	137,865.7	62.6%	99,198.0	75,332.1	31.7%
Residential	45,251.8	66,205.7	46.3%	46,283.8	35,719.9	29.6%
Nonresidential	23,362.1	47,433.3	103.0%	37,536.8	26,102.1	43.8%
Additions, Alterations, and Repairs	16,164.0	24,226.7	49.9%	15,377.4	13,510.1	13.8%
New Dwelling Units (no.)	513	807	57.3%	566	456	24.1%
Employment						
Civilian Labor Force (thous.)	799.7	808.4	1.1%	797.5	778.6	2.4%
Total Employed Persons	763.2	773.1	1.3%	762.8	742.0	2.8%
Unemployed Persons	36.4	35.3	-3.0%	34.8	36.1	-3.8%
Percent Total Labor Force	4.6	4.4	-4.3%	4.4	4.7	-7.3%
Employees on Nonagricultural Payrolls (thous. of jobs)	690.9	723.4	4.7%	712.5	680.4	4.7%
Manufacturing	104.3	107.4	3.0%	104.8	102.1	2.7%
Mining	8.3	8.8	6.0%	8.5	7.9	8.0%
Contract Construction	28.7	29.6	3.1%	26.8	25.7	4.4%
Transportation, Communication, and Utilities	41.1	43.1	4.9%	42.4	40.5	4.8%
Wholesale Trade	39.2	40.5	3.3%	39.7	37.7	5.5%
Retail Trade	129.2	137.6	6.5%	133.3	125.2	6.5%
Finance, Insurance, and Real Estate	33.8	34.6	2.4%	33.8	33.3	1.6%
Services 3	168.8	180.8	7.1%	174.7	163.2	7.1%
Federal Government	40.5	39.5	-2.5%	40.3	39.9	0.9%
State Government 4	38.2	40.1	5.0%	41.4	39.5	4.9%
Local Government 4	58.9	61.4	4.2%	66.7	65.6	1.8%
Average Weekly Hours						
Manufacturing	40.2	39.8	-1.0%	40.0	40.2	-0.5%
Mining	41.6	43.7	5.0%	42.4	40.6	4.4%
Wholesale Trade	37.2	39.5	6.2%	37.0	37.6	-1.4%
Retail Trade	28.0	27.5	-1.8%	26.9	27.4	-1.6%
Amount of Unemployment Compensation (thous. of dol.)	4,401.6	3,745.5	-14.9%	4,905.6	5,221.4	-6.0%
Finance						
Savings, Savings and Loan Association (mil. of dol.)	2,172.4	1,779.3	-18.1%	1,948.7	2,269.5	-14.1%
Tax Collections by the State of Utah (thous. of dol.)						
Total Tax Collections	80,700.2	87,242.3	8.1%	163,248.9	151,863.8	7.5%
Sales and Use Tax	3,085.9	5,744.0	86.1%	58,764.8	56,184.3	4.6%
Motor Fuel Tax	12,333.7	12,439.3	0.9%	11,042.9	11,825.9	-6.6%
Individual Income Tax	45,612.6	49,631.1	8.8%	54,555.5	52,625.2	3.7%
Corporation Franchise Tax	195.2	1,101.0	465.6%	3,735.0	7,540.8	-50.5%
Production						
Crude Oil to Refineries (thous. of bbls.)	3,552.5	NA	NA	NA	4,205.3	NA
Crude Oil (thous. of bbls.)	2,417.1	2,282.1	-5.6%	2,322.7	2,447.8	-5.1%
Natural Gas (mil. of cu. ft.)	23,713.5	27,190.1	14.7%	25,355.0	22,791.7	11.2%
Coal (thous. short tons)	1,822.0	2,243.0	23.1%	1,902.3	1,575.7	20.7%
Tourism/Travel						
Air Passengers (total no. on and off)(S.L. Int'l Airport)	1,218,317	1,213,716	-0.4%	1,006,615	944,252	6.6%
Highway Traffic Count Across State Lines	41,318	44,666	8.1%	43,092	NA	NA
Transient Room Taxes (thous. of dol.)	85.1	437.1	413.6%	670.7	549.1	22.1%
Visits, State, Nat'l. Parks, Monuments (thous.)	2,318.0	2,110.5	-9.0%	1,116.4	1,104.9	1.0%
Utilities						
Telephone Lines in Service (Mt. Bell)(Residential)	498,802	518,274	3.9%	510,917	495,956	3.0%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	186,970	196,880	5.3%	191,111	184,754	3.4%
Electric Customers (Residential)	483,513	489,297	1.2%	488,285	481,770	1.4%
Electric Customers (Commercial)	48,743	49,999	2.6%	49,334	47,663	3.5%
Natural Gas Customers (Residential & Commercial)	470,565	483,823	2.8%	482,358	467,986	3.1%
Natural Gas Customers (Industrial)	567	578	1.9%	570	561	1.5%

Utah Business Statistics

UTAH DATA	Aug. 1989	Aug. 1990	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Davis County						
Non-Ag. Employment (thous.)	58.4r	60.4f	3.4%	58.0	55.6	4.2%
Unemployment Rate	4.6r	4.7	2.2%	4.2	4.2	-1.6%
Auth. Permit Construction (thous. of dol.)	10,120.0	9,421.7	-6.9%	10,603.8	9,021.7	17.5%
New Dwelling Units (no.)	78	80	2.6%	76	65	17.0%
Postal Receipts (thous. of dol.)	574.1	531.1	-7.5%	641.8	549.9	16.7%
Electric Customers (Residential)	49,133	50,110	2.0%	49,750	48,658	2.2%
Electric Customers (Commercial)	3,611	3,665	1.5%	3,670	3,578	2.6%
Natural Gas Customers (Residential)	51,652	52,707	2.0%	52,565	51,392	2.3%
Natural Gas Customers (Industrial)	56	57	1.8%	56	55	2.3%
Telephone Lines in Service (Mt. Bell)(Residential)	57,128	60,742	6.3%	59,216	56,368	5.1%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	12,072	12,995	7.6%	12,560	11,770	6.7%
Salt Lake County						
Non-Ag. Employment (thous.)	353.0r	369.1f	4.6%	363.8	348.2	4.5%
Unemployment Rate	4.1r	4.0	-2.4%	3.9	4.2	-8.1%
Auth. Permit Construction (thous. of dol.)	37,186.7	63,550.7	70.9%	43,930.9	32,024.9	37.2%
New Dwelling Units (no.)	176	244	38.6%	196	168	16.3%
Postal Receipts (thous. of dol.)	7,908.1	7,520.0	-4.9%	8,027.8	8,270.3	-2.9%
Electric Customers (Residential)	242,704	246,151	1.4%	245,417	242,159	1.3%
Electric Customers (Commercial)	21,165	21,093	-0.3%	21,102	20,756	1.7%
Natural Gas Customers (Residential)	223,028	227,171	1.9%	227,259	223,310	1.8%
Natural Gas Customers (Industrial)	245	246	0.4%	245	241	1.9%
Telephone Lines in Service (Mt. Bell)(Residential)	234,988	244,445	4.0%	240,530	233,274	3.1%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	113,383	119,196	5.1%	116,142	112,232	3.5%
Utah County						
Non-Ag. Employment (thous.)	85.9r	92.5f	7.7%	90.5	85.1	6.3%
Unemployment Rate	4.4r	3.6	-18.2%	3.8	4.1	-7.7%
Auth. Permit Construction (thous. of dol.)	12,789.5	22,248.2	74.0%	14,639.8	12,245.5	19.6%
New Dwelling Units (no.)	95	197	107.4%	100	72	40.2%
Postal Receipts (thous. of dol.)	1,328.8	1,612.9	21.4%	1,666.4	1,343.8	24.0%
Electric Customers (Residential)	53,398	52,335	-2.0%	53,257	52,934	0.6%
Electric Customers (Commercial)	6,346	7,585	19.5%	6,923	6,023	15.0%
Natural Gas Customers (Residential)	62,934	64,581	2.6%	64,033	62,679	2.2%
Natural Gas Customers (Industrial)	73	74	1.4%	74	72	1.5%
Telephone Lines in Service (Mt. Bell)(Residential)	65,131	66,812	2.6%	66,657	65,853	1.2%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	21,099	21,178	0.4%	20,366	21,146	-3.7%
Weber County						
Non-Ag. Employment (thous.)	63.1r	66.8f	5.9%	66.2	63.5	4.3%
Unemployment Rate	5.8r	6.4	10.3%	5.4	5.5	-3.2%
Auth. Permit Construction (thous. of dol.)	6,739.2	13,331.6	97.8%	7,360.2	5,196.1	41.6%
New Dwelling Units (no.)	57	48	-15.8%	44	44	1.1%
Postal Receipts (thous. of dol.)	639.4	708.1	10.7%	721.1	682.7	5.6%
Electric Customers (Residential)	53,998	54,996	1.8%	54,648	53,999	1.2%
Electric Customers (Commercial)	5,030	5,084	1.1%	5,075	4,986	1.8%
Natural Gas Customers (Residential)	50,264	51,000	1.5%	51,080	50,319	1.5%
Natural Gas Customers (Industrial)	85	82	-3.5%	83	84	-1.3%
Telephone Lines in Service (Mt. Bell)(Residential)	47,331	47,083	-0.5%	47,135	47,078	0.1%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	12,255	13,276	8.3%	12,894	12,167	6.0%

1 Obtained from U.S. Bureau of the Census Construction Statistics Division.
2 Obtained from *Utah Construction Report*.
3 Includes services by nonprofit and religious organizations.
4 Includes public schools and college institutions.

NA Not Available
a Number partially includes July data not previously reported due to a computer failure in government offices.
r Revised
f Forecast

Sources:

Personal Income	U.S. Department of Commerce, Bureau of Economic Analysis.
New Corporations	Utah Secretary of State.
New Car and Truck Sales	Utah State Tax Commission, Economic and Statistical Unit.
Agriculture	U.S. Department of Agriculture, Utah Agricultural Statistics Service, *Utah Agriculture*.
Construction Data	U.S. Bureau of the Census and Bureau of Economic and Business Research, *Utah Construction Report*.
Employment Data	Utah Department of Employment Security.
Savings Information	Utah Savings and Loan Institutions.
Tax Collections	Utah State Tax Commission.
Crude Oil Production	Utah Department of Oil, Gas, and Mining and Area Oil Refineries.
Natural Gas Production	Utah Department of Oil, Gas, and Mining.
Coal Production	U.S. Department of Energy.
Air Passengers	Salt Lake City International Airport, Statistics Division.
Highway Traffic Count	Utah Department of Transportation.
Visits to State and National Parks and Monuments	U.S. Forest Service, Utah State Parks and Recreation Department.
Utilities Data	Cooperating Utah Utility Companies.
Postal Receipts	Postmasters in Davis, Salt Lake, Utah, and Weber Counties

Utah Business Statistics

UTAH DATA	Sept. 1989	Sept. 1990	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Total Personal Income (seasonally adjusted) (mil. of dol.) (qtly.)	22,444	NA	NA	NA	21,900	NA
New Corporations (no.)	513	508	-1.0%	495	456	8.6%
New Car, Truck, and Motor Home Sales (no.)	4,794	5,468	14.1%	5,046	5,133	-1.7%
Agriculture						
Average Prices Recorded by Farmers (dol.)						
Beef Steers and Heifers (cwt) (thous.)	69.20	74.00	6.9%	75.38	71.56	5.3%
Lambs (cwt)	62.70	49.40	-21.2%	51.39	62.68	-18.0%
Milk Wholesale (cwt)	13.20	13.40	1.5%	13.61	12.17	11.8%
Alfalfa Hay, Baled (per ton)	85.00	80.00	-5.9%	84.92	82.92	2.4%
Cattle Slaughtered (live weight) (thous. of lbs.)	48,265	42,803	-11.3%	47,444	47,524	-0.2%
Construction						
Total Construction (thous. of dol.) 1	122,772.2	80,603.4	-34.3%	85,276.4	74,818.8	14.0%
Residential	43,651.4	46,391.4	6.3%	43,276.3	35,504.5	21.9%
Nonresidential	40,228.5	20,233.7	-49.7%	27,789.9	24,255.9	14.6%
Additions, Alterations, and Conversions	38,892.3	13,979.3	-64.1%	14,210.3	15,058.4	-5.6%
Total Permit Construction (thous. of dol.) 2	105,477.3	154,762.1	46.7%	103,305.1	78,607.9	31.4%
Residential	43,891.6	51,801.0	18.0%	46,942.9	36,379.4	29.0%
Nonresidential	45,793.3	40,061.3	-12.5%	37,059.2	28,293.4	31.0%
Additions, Alterations, and Repairs	15,792.4	62,899.8	298.3%	19,303.0	13,935.0	38.5%
New Dwelling Units (no.)	563	605	7.5%	570	462	23.3%
Employment						
Civilian Labor Force (thous.)	809.0	817.5	1.1%	798.6	781.2	2.2%
Total Employed Persons	775.4	783.2	1.0%	763.4	744.8	2.5%
Unemployed Persons	33.6	34.3	2.1%	35.2	36.0	-2.2%
Percent Total Labor Force	4.2	4.2	0.0%	4.4	4.7	-5.7%
Employees on Nonagricultural Payrolls (thous. of jobs)	703.8	736.2	4.6%	715.1	682.8	4.7%
Manufacturing	104.6	108.0	3.3%	105.1	102.3	2.7%
Mining	8.4	8.6	2.4%	8.6	7.9	7.8%
Contract Construction	28.7	29.8	3.8%	26.9	25.7	4.4%
Transportation, Communication, and Utilities	41.5	43.2	4.1%	42.5	40.5	4.9%
Wholesale Trade	39.3	40.2	2.3%	39.9	37.9	5.1%
Retail Trade	130.1	138.1	6.1%	133.9	125.7	6.5%
Finance, Insurance, and Real Estate	33.7	34.6	2.7%	33.9	33.3	1.8%
Services 3	171.8	184.8	7.6%	175.8	164.1	7.1%
Federal Government	40.2	39.1	-2.7%	40.2	40.0	0.5%
State Government 4	38.4	40.0	4.2%	41.5	39.7	4.7%
Local Government 4	67.1	69.8	4.0%	67.0	65.7	2.0%
Average Weekly Hours						
Manufacturing	39.9	40.2	0.8%	40.0	40.1	-0.2%
Mining	41.6	47.4	13.9%	42.8	40.7	5.2%
Wholesale Trade	37.6	38.7	2.9%	37.1	37.6	-1.2%
Retail Trade	28.0	27.0	-3.6%	26.8	27.3	-2.1%
Amount of Unemployment Compensation (thous. of dol.)	3,483.3	3,104.8	-10.9%	4,874.1	5,176.4	-5.8%
Finance						
Savings, Savings and Loan Association (mil. of dol.)	2,184.7	1,576.4	-27.8%	1,898.0	2,250.9	-15.7%
Tax Collections by the State of Utah (thous. of dol.)						
Total Tax Collections	78,971.2	79,396.0p	0.5%	163,284.3	155,957.9	4.7%
Sales and Use Tax	556.9	2,875.0p	416.3%	58,958.0	55,990.7	5.3%
Motor Fuel Tax	12,537.9	11,396.3p	-9.1%	10,947.8	11,822.7	-7.4%
Individual Income Tax	42,483.0	42,523.2p	0.1%	54,558.9	52,306.5	4.3%
Corporation Franchise Tax	16,374.4	6,574.7p	-59.8%	2,918.4	7,910.5	-63.1%
Production						
Crude Oil to Refineries (thous. of bbls.)	3,479.8	NA	NA	NA	4,110.3	NA
Crude Oil (thous. of bbls.)	2,349.7	2,209.8	-6.0%	2,311.0	2,423.8	-4.7%
Natural Gas (mil. of cu. ft.)	22,954.7	26,861.2	17.0%	25,680.6	22,910.8	12.1%
Coal (thous. short tons)	1,763.0	1,837.0	4.2%	1,908.5	1,596.0	19.6%
Tourism/Travel						
Air Passengers (total no. on and off)(S.L. Int'l Airport)	957,536	950,450	-0.7%	1,006,025	956,175	5.2%
Highway Traffic Count Across State Lines	41,318	44,666	8.1%	43,281	37,397	15.7%
Transient Room Taxes (thous. of dol.)	-1.1	3.3p	-400.0%n	671.1	546.1	22.9%
Visits, State, Nat'l. Parks, Monuments (thous.)	1,556.6	1,493.4	-4.1%	1,111.1	1,107.7	0.3%
Utilities						
Telephone Lines in Service (Mt. Bell)(Residential)	503,001	522,945	4.0%	512,579	497,047	3.1%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	186,485	197,664	6.0%	192,043	185,044	3.8%
Electric Customers (Residential)	483,809	491,531	1.6%	488,929	482,402	1.4%
Electric Customers (Commercial)	48,777	49,822	2.1%	49,421	47,816	3.4%
Natural Gas Customers (Residential & Commercial)	471,469	485,166	2.9%	483,499	469,294	3.0%
Natural Gas Customers (Industrial)	568	577	1.6%	570	563	1.4%

Utah Business Statistics

UTAH DATA	Sept. 1989	Sept. 1990	% Change from Year Ago	12 Month Average This Year	12 Month Average Last Year	12-Month Average % Change
Davis County						
Non-Ag. Employment (thous.)	57.9r	59.8f	3.3%	58.2	55.9	4.2%
Unemployment Rate	4.6r	4.5	-2.2%	4.2	4.2	-0.6%
Auth. Permit Construction (thous. of dol.)	9,833.0	12,083.4	22.9%	10,791.4	9,269.4	16.4%
New Dwelling Units (no.)	71	85	19.7%	77	66	17.2%
Postal Receipts (thous. of dol.)	582.2	581.6	-0.1%	641.7	563.6	13.9%
Electric Customers (Residential)	49,335	50,003	1.4%	49,805	48,754	2.2%
Electric Customers (Commercial)	3,632	3,621	-0.3%	3,669	3,591	2.2%
Natural Gas Customers (Residential)	51,670	52,886	2.4%	52,667	51,508	2.2%
Natural Gas Customers (Industrial)	56	57	1.8%	56	55	2.0%
Telephone Lines in Service (Mt. Bell)(Residential)	57,454	60,927	6.0%	59,506	56,516	5.3%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	12,196	13,015	7.5%	12,636	11,820	6.9%
Salt Lake County						
Non-Ag. Employment (thous.)	357.7r	374.3f	4.6%	364.8	349.2	4.5%
Unemployment Rate	4.1r	3.9	-4.9%	3.9	4.2	-6.9%
Auth. Permit Construction (thous. of dol.)	52,687.7	97,367.1	85.0%	47,662.5	34,064.1	39.9%
New Dwelling Units (no.)	190	212	11.6%	198	165	19.4%
Postal Receipts (thous. of dol.)	7,617.0	7,693.3	1.0%	8,034.2	8,238.7	-2.5%
Electric Customers (Residential)	242,380	246,521	1.7%	245,762	242,440	1.4%
Electric Customers (Commercial)	20,821	21,089	1.3%	21,124	20,791	1.6%
Natural Gas Customers (Residential)	223,253	227,834	2.1%	227,641	223,704	1.8%
Natural Gas Customers (Industrial)	245	246	0.4%	245	241	1.8%
Telephone Lines in Service (Mt. Bell)(Residential)	236,663	246,110	4.0%	241,317	233,760	3.2%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	113,690	119,508	5.1%	116,625	112,399	3.8%
Utah County						
Non-Ag. Employment (thous.)	90.0r	96.8f	7.6%	93.1	85.4	6.6%
Unemployment Rate	4.1r	3.8	-7.3%	3.8	4.1	-7.5%
Auth. Permit Construction (thous. of dol.)	13,353.5	12,693.2	-4.9%	14,584.8	12,621.9	15.6%
New Dwelling Units (no.)	77	94	22.1%	102	72	41.3%
Postal Receipts (thous. of dol.)	1,480.2	NA	NA	NA	1,367.6	NA
Electric Customers (Residential)	53,322	53,777	0.9%	53,295	52,962	0.6%
Electric Customers (Commercial)	6,735	7,523	11.7%	6,989	6,082	14.9%
Natural Gas Customers (Residential)	62,615	63,339	2.8%	64,177	62,781	2.2%
Natural Gas Customers (Industrial)	73	74	1.4%	74	73	0.9%
Telephone Lines in Service (Mt. Bell)(Residential)	66,845	68,218	2.1%	66,774	65,972	1.2%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	20,074	21,356	6.4%	20,473	21,081	-2.9%
Weber County						
Non-Ag. Employment (thous.)	63.9r	68.1f	6.6%	66.5	63.6	4.6%
Unemployment Rate	5.8r	6.3	8.6%	5.5	5.5	-0.2%
Auth. Permit Construction (thous. of dol.)	8,578.0	5,491.6	-36.0%	7,103.0	5,579.8	27.3%
New Dwelling Units (no.)	56	43	-23.2%	43	45	-4.6%
Postal Receipts (thous. of dol.)	708.8	656.6	-7.4%	716.8	680.2	5.4%
Electric Customers (Residential)	54,142	54,956	1.5%	54,716	54,061	1.2%
Electric Customers (Commercial)	5,036	5,164	2.5%	5,086	4,991	1.9%
Natural Gas Customers (Residential)	50,288	51,211	1.8%	51,157	50,399	1.5%
Natural Gas Customers (Industrial)	85	81	-4.7%	83	85	-1.9%
Telephone Lines in Service (Mt. Bell)(Residential)	47,605	47,390	-0.5%	47,117	47,159	-0.1%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	12,318	13,373	8.6%	12,982	12,184	6.5%

1 Obtained from U.S. Bureau of the Census Construction Statistics Division.
2 Obtained from *Utah Construction Report*.
3 Includes services by nonprofit and religious organizations.
4 Includes public schools and college institutions.

NA Not Available
p Preliminary Data
n Not Meaningful Due to Negative Data
r Revised
f Forecast

Sources:

Personal Income	U.S. Department of Commerce, Bureau of Economic Analysis.
New Corporations	Utah Secretary of State.
New Car and Truck Sales	Utah State Tax Commission, Economic and Statistical Unit.
Agriculture	U.S. Department of Agriculture, Utah Agricultural Statistics Service, *Utah Agriculture*.
Construction Data	U.S. Bureau of the Census and Bureau of Economic and Business Research, *Utah Construction Report*.
Employment Data	Utah Department of Employment Security.
Savings Information	Utah Savings and Loan Institutions.
Tax Collections	Utah State Tax Commission.
Crude Oil Production	Utah Department of Oil, Gas, and Mining and Area Oil Refineries.
Natural Gas Production	Utah Department of Oil, Gas, and Mining.
Coal Production	U.S. Department of Energy.
Air Passengers	Salt Lake City International Airport, Statistics Division.
Highway Traffic Count	Utah Department of Transportation.
Visits to State and National Parks and Monuments	U.S. Forest Service, Utah State Parks and Recreation Department.
Utilities Data	Cooperating Utah Utility Companies.
Postal Receipts	Postmasters in Davis, Salt Lake, Utah, and Weber Counties.

Bureau of Economic and Business Research
University of Utah
Salt Lake City, Utah 84112
Return Postage Guaranteed
(Non-Profit Organization)

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Permit No. 1529
Salt Lake City, Utah

NATIONAL DATA	Sept. 1989	Sept. 1990	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
U.S. Gross National Product (seasonally adjusted) (bil.) (qtly.)	5,238.6	5,520.6	5.4%	5,407.2	5,130.9	5.4%
Total Personal Income (seasonally adjusted) (bil. of dol.)	4,411.6	4,699.4	6.5%	4,583.7	4,313.5	6.3%
Industrial Production Indexes (seasonally adjusted) (1987=100)	108.2	110.5	%	109.1	107.8	1.2%
New Plant and Equipment Expenditures by Business (bil.) (qtly.)	515.0	532.5	3.4%	530.0	493.1	7.5%
Net Exports of Goods and Services (bil.) (qtly.)	−49.3	−39.3	−20.3%	−32.4	−54.9	−41.0%
Exports of Goods and Services (bil.) (qtly.)	623.7	667.7	7.1%	657.9	611.3	7.6%
Imports of Goods and Services (bil.) (qtly.)	673.0	706.9	5.0%	690.2	666.2	3.6%
Index of Leading Indicators (1982=100)	144.9	143.3	−1.1%	145.0	144.8	0.2%
Price Indexes						
Consumer Price Indexes (not seasonally adjusted) (1982-84=100)						
CPI-U (All Urban Consumers) All Items	125.0	132.7	6.2%	128.7	122.6	5.0%
CPI-U (All Urban Consumers) Food & Beverages	125.9	133.0	5.6%	130.4	123.3	5.7%
CPI-U (All Urban Consumers) Housing	124.3	130.5	5.0%	127.1	121.8	4.3%
CPI-U (All Urban Consumers) Transportation	113.7	123.0	8.2%	117.6	113.0	4.1%
CPI-U (All Urban Consumers) Medical Care	151.7	165.8	9.3%	159.2	146.3	8.8%
CPI-U (All Urban Consumers) Energy	95.9	108.8	13.5%	97.8	93.2	4.9%
Producer Price Index (not seasonally adjusted) (1982=100)						
Producer Price Index, All Finished Goods	113.5	120.3	6.0%	117.2	112.2	4.5%
GNP Price Deflator (1982=100) (qtly.)	126.8	132.3	4.3%	130.2	125.2	4.0%
Civilian Employment (seasonally adjusted)						
Total Civilian Labor Force (mil.)	124.0	125.0	0.8%	124.7	123.4	1.1%
Total Civilian Employment (mil.)	117.4	117.9	0.4%	118.0	116.9	1.0%
Unemployment Rate	5.3	5.7	7.5%	5.4	5.3	1.9%
Construction						
Total Construction (mil. of dol.)	25,267.0	19,248.0	−23.8%	19,927.7	22,240.7	−10.4%
Residential	10,600.0	8,463.0	−20.2%	9,228.2	10,279.9	−10.2%
Nonresidential	10,119.0	7,173.0	−29.1%	6,923.2	7,928.0	−12.7%
Non-Building	4,548.0	3,612.0	−20.6%	3,776.3	4,032.8	−6.4%
New Dwelling Units (no.)	119,178	90,578	−24.0%	99,663	117,777	−15.4%
Interest Rates						
Federal Funds Rate	9.02	8.20	−9.1%	8.32	9.18	−9.4%
Short Term (3-month Treasury bill rate)	7.72	7.38	−4.4%	7.66	8.13	−5.7%
Long Term (30-year Treasury bond yields)	8.31	9.11	9.6%	8.60	8.83	−2.6%
Prime Rates Charged by Banks on Short-term Business Loans (avg.)	10.50	10.00	−4.8%	10.13	10.79	−6.1%
Mortgage Rates (new homes)	9.87	9.60	−2.7%	9.73	9.56	1.7%

Sources: *Survey of Current Business*, U.S. Department of Commerce: U.S. Gross National Product, Total Personal Income, Industrial Production Indexes, New Plant and Equipment Expenditures by Business, Export/Import Data, Index of Leading Indicators, GNP Price Deflator, National Employment Data, Interest Rates.

F.W. Dodge Report, McGraw-Hill: National Construction Data.

Monthly Labor Review, U.S. Department of Labor, Bureau of Labor Statistics: Consumer Price Indexes, Producer Price Index.

Chase N. Peterson, *President, University of Utah*
John Seybolt, *Dean, Graduate School of Business*

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